1922

ANNUAL REPORT

MEDICAL DEPARTMENT

SUDAN GOVERNMENT

ON CIVIL MEDICAL WORK IN THE SUDAN

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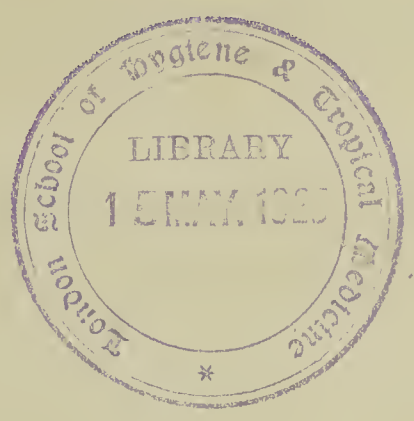

ANNUAL REPORT

MEDICAL DEPARTMENT - SUDAN GOVERNMENT

ON CIVIL WORK IN THE SUDAN

GENERAL PROGRESS - Two new dispensaries have been opened in deference to urgent requests from the provinces concerned, one at Renk in the Upper Nile Province and the other at Rashad in the Nuba Mountains Province.

BILHARZIASIS - Extremely valuable work has been carried out by Assistant Medical Officers in Dongola Province where a severe epidemic of Bilharziasis had broken out in connection with the pumping stations at Nuri and Gureir and also at Magall and Tangassi Island. 5,478 injections of Antimonium Tartrate were made and 455 cases were cured. This is an extremely good piece of work carried out in the course of less than one year by two Assistant Medical Officers. It indicates how the spread of this disease in the much larger irrigated areas will have to be dealt with.

An endeavour is now being made to completely stamp out Bilharziasis in Dongola Province in which it has for long been endemic.

HOSPITAL SHIP "LADY BAKER" - The "Lady Baker" was put in commission this spring. She has performed most valuable work and has brought medical assistance to many tribes and districts up to that time unreached.

MIDWIVES' TRAINING SCHOOL AT OMDURMAN - The midwives school continues to carry on most excellent work. Fifteen midwives were trained and licensed to practise.

SCHOOL INSPECTION - A complete medical survey of all the boys of the Gordon College and Omdurman School was able to be carried out for the first time. The results were very instructive.

LABORATORY TRAINING FOR ASSISTANT MEDICAL OFFICERS - Five Assistant Medical Officers received a six weeks' course of laboratory training. It is hoped in the future to give all Assistant Medical Officers this training. The Director,

Wellcome Tropical Research Laboratories has kindly undertaken to arrange these courses.

NEW BUILDINGS - Two new hospitals, one at Kassala and one at Halfa have been completed this year.

At Nahud a new burnt brick administrative block and two new mud brick wards with corrugated iron roofs are being commenced. The funds are being provided by the Local Provincial Services.

BIRTH AND DEATH REGISTRATION - A new system of birth and death registration was initiated on 1st. January, 1922. A very considerable improvement in the returns has been thus effected. The question of obtaining accurate vital statistics is an extremely difficult one and it will be many years before it will be possible to ensure these statistics being in any way reliable.

PERSONNEL -

The retirement on pension of Dr.E.S.Crispin,C.B.E. the late Director in August, 1922, is felt to be a great loss to this Department.

The following changes have taken place during the year:-

A P P O I N T M E N T S

Dr.O.F.H.Atkey appointed Director	24-8-22.
Dr.E.A.H.Grylls appointed Medical Inspector	6-9-22.
Dr.Morcos Eff.Butros appointed Medical Officer (for Sleeping Sickness duty)	20.10.21.
Dr.Mohamed Eff.Id appointed Medical Officer	20.11.21.
Dr.Nesib Eff.Yusif Haddad " "	1.11.21.
Dr.Sami Eff.Fadlalla Himadeh " "	1.4. 22.
Dr.Yervant Eff.Khatanassian " "	3.8. 22.
Dr.Naif Effendi Hassan " "	1.8. 22.
A.M.O.Ahmed Abdalla Billiah appointed Asst.Medical Officer	1.4.22.
A.M.O.Abdel Maged Hamad Hassan " " "	1.4.22.
A.M.O.Mohamed Yahia " " "	1.4.22.

T R A N S F E R S

El Haim.J.T.Simson Bey to Egyptian Army	6.12.21.
El Bimb.J.Mc.P.Mackinnon to Egyptian Army	21.9.22.

El Bimb. G.d'R.Carr to British Army		1.3.22.
Mr.E.Tinsdill,Sanitary Inspector to Customs Dept.		25.6.22.
El Sagh.Mikhail Eff.Sughayar to Egyptian Army		1.10.22.
El Yusb.Caesar Eff. Khouri	" "	1.7. 22.
El Yusb.Negib Eff.Yusef Yunis,M.B.E.	"	1.7. 22.
El Yusb.Nesib Eff.Haddad	" "	1.7. 22.
El Bimb.G.K.Maurice,D.S.O. from Egyptian Army (for Sleeping Sickness duty)		10.4.22.
El Bimb.J.H.Baird	" " "	6.7. 22.
El Yusb.Negib Eff.Yusef Yunis,M.B.E.	" "	6.7. 22.
M.A. Albert Eff.Karam	" "	21.11.21.
M.A.Mohamed Eff.Goma	" "	6.5. 22.
El Yusb.Michael Eff.Maroun Khayat from Egyptian Army		1.7. 22.
El Yusb.Halim Eff.Khalil Saadeh	" "	1.7. 22.
El Yusb,Joseph Eff.Salama,M.B.E.	" "	1.7. 22.

RESIGNATIONS AND DISCHARGES

Dr.E.S.Crispin,C.B.E.	To pension	24.8.22.
Dr.Habib Eff.Nabaa	Resigned	12.2,22.
Dr.Selim Bey Atiyah	To pension	23.1.22.
Mr.W.Nixon	Expiration of contract	25.6.22.
Dr.Ali Eff.Taffaha	Discharged	15.12.21.

I regret to report the deaths of :-

Dr.Antoun Eff. Khouri	20.2.22.
Dr.Adib Eff.Hummam	14.6.22.
Dispenser Rufail Eff. Sayigh	12.9.22.

MEDICAL WORK BY PROVINCES :-

KHARTOUM PROVINCE :-

Khartoum Civil Hospital - A heavy strain was thrown on the work of this hospital by the epidemic of malaria which broke out this autumn. The congestion in the out-patient department, at all times quite inadequate for the work it has to, do, was very serious.

The excellent work in training Assistant Medical Officers has been carried on. Five new Assistant Medical Officers were passed out in the course of the year, and five are now in training.

Interesting work was carried out on the effect of worm infections on the incidence and course of other diseases, especially on malaria. Out of 1615 admissions, 1221 were examined for intestinal parasites. Of these patients 534 (or nearly half) were found to be harbouring these parasites. Ankylostoma was found to be far the most common infection, the next most common was found to be Bilharzia. The total of worm infections was 687, and out of these 248 were ankylostoma.

Omdurman Civil Hospital - This is a mud brick hospital, the buildings of which date from the time of the Khalifa. They are quite unsuitable for the work they have to perform, being low, dark, uncomfortable and depressing. The general arrangement of the buildings is inconvenient. It is only with great difficulty that they can be kept in an adequate state of repair.

No advance can take place in the work of the hospital until a new and suitable building has been erected. There is great scope for medical work at Omdurman.

Khartoum North Dispensary is suitable for its present needs, and has been doing good work.

The Leper Hoosh at Omdurman - There are 22 patients in this enclosure, of whom 10 are men and 12 are women. The building consists of an outside mud wall, surrounding an enclosure containing two wards, 4 married quarters and 6 single rooms, and a dispensary. The standard of comfort provided is not high, but the patients are ensured shelter and food, and their wounds are dressed. The medical supervision has most kindly been undertaken by Dr. Lloyd of the Church Missionary Society.

Injections of Moogrol and Colloidal Antimonium Sulphide are being tried by Dr. Lloyd. It is, however, too early to arrive at any definite conclusions as to the value of the treatment. Improvement practically always takes place subsequently to admission in consequence of the better food and

~~and~~ increased comfort afforded.

BERBER PROVINCE :- Excellent work continues to be done at Atbara Civil Hospital, and at the dispensaries at Berber, El-Damer, Shendi and Abu Hamed.

The sanitary condition of Bouga Government Farm shows marked improvement. Considerable difficulty is still experienced with the other Government Farm, owing to lack of funds to ensure proper levelling and drainage, and the difficulty of enforcing sanitary requirements on tenants who are willing to throw up their holdings at a moment's notice if compulsion is used in these matters.

A car is urgently needed for the Senior Medical Inspector of this Province to enable him to inspect the Irrigation Farms and basins in the short time that he has at his disposal for this purpose.

RED SEA PROVINCE :- The hospitals at Port Sudan and Suakin and the dispensaries at Tokar and Sinkat continue to do good work. The problem of sanitation at Port Sudan is becoming exceedingly difficult and is engaging the earnest attention of the local authorities.

BLUE NILE PROVINCE :- The hospital accommodation at Wad Medani Civil Hospital is quite insufficient to deal with the large population of the Gezira. It is hoped that a new hospital will be commenced shortly and that it will be completed in time to meet the increased hospital accommodation demanded by the canalisation works.

The dispensaries at Rufaa, Kamlin and Sennar are doing good work. It is hoped to open a new dispensary at Managil in the course of the ensuing year.

A British Sanitary Inspector is to be posted at Wad Medani from 1st. January, 1923, to supervise sanitation at Medani, and in the irrigated area. Up to the present this work has been carried out by native Sanitary Overseers, supervised by the Medical Inspector, but the calls on the Medical Inspector's time have become too heavy to enable him to carry

out this supervision.

The prevention of malaria on the large area to be brought under perennial irrigation presents a problem of considerable magnitude. This problem can only be solved by adequate supervision and ready cooperation between the sanitary authorities and the persons responsible for the supervision of irrigation or cultivation. During the rains the problem will become one of the greatest difficulty.

A readjustment of the sanitary control at Makwar and the irrigated area has been arranged.

In future the Medical Inspector at Makwar is to be responsible for Makwar and the outlying stations of Gebel Moya and Gebel Sagadi, and the zone of the main canal as far as and including Hag Abdalla.

A second Medical Inspector will be stationed at Wad Medani who will be responsible for the whole irrigated area extending as far as but not including the first regulator at Kilo 57 just north of Hag Abdalla.

This arrangement should ensure far more effective supervision of the canalisation area.

Makwar - The hospital was completed at the close of 1921 and now provides accommodation for a total of 115 patients.

A small isolation block will be necessary to deal with sporadic infectious cases;one or more of such cases are practically always under treatment.

Should an epidemic occur marquees and bursh shelters will have to be erected.

During the winter months the average sick in hospital represented a percentage of 1.3 of the number of workmen employed at Makwar. The figure for the previous winter was 1.1.

In the spring of 1922 the works were closed down, and by August the number of men employed had been reduced to 60. In view of the small number of workmen employed and the uncertainty as to the reopening of the works, two sanitary precautions - the punctual clearing of the grass in and around

the station and the pumping out of the marshes, were allowed to slide. At once the admissions for malaria rose to 20,60, and 50 per cent for the three months of August, September and October, i.e. more than 5 times heavier than during the previous autumn. This should be looked on as a reminder that Makwar is in its origin nothing more or less than a malarial swamp, and that nothing less than the most unremitting vigilance can prevent it returning to that condition.

WHITE NILE PROVINCE :-

El-Dueim - The small hospital here was placed in charge of an Assistant Medical Officer, Mohamed El Nail, in May of this year; previously it has always been in charge of a Syrian Medical Officer. The work has been carried on very satisfactorily.

Kosti non-dieted hospital has been in charge of an Assistant Medical Officer, Ali Sherif since 1909. This Assistant Medical Officer is also in immediate medical charge of the railway line between Kosti and El-Obeid. This latter is a charge of great responsibility during the rainy season, and the results obtained reflect great credit on him.

KORDOFAN PROVINCE :-

El-Obeid Hospital - The temporary wards have been rebuilt and the accommodation afforded to patients has been in consequence greatly improved.

Nahud - A new permanent administrative block, comprising operating theatre, out-patient rooms and offices, etc. is being built, as also two new temporary wards (one for 3rd. class male patients, and one for female patients). There is no doubt that the development of medical work in this Merkaz has been held up by lack of adequate hospital accommodation and it is hoped that a considerable increase in this work will now take place.

An Assistant Medical Officer has been stationed at this hospital to set the Medical Officer free to carry out periodical medical tours. The surrounding population is still almost untouched by medical work.

Um Ruaba - The dispensary here in charge of an Assistant Medical Officer continues to do excellent work.

Rashad - A new dispensary was opened here last spring and the work done by the Assistant Medical Officer in charge is well reported on.

HALFA PROVINCE :-

Halfa - A new and very satisfactory hospital has been built to replace the old hospital which was condemned as unsafe.

Abri - A dispensary here is in charge of an Assistant Medical Officer.

The difficulty of communication in this Province precludes any marked development of hospital work.

KASSALA PROVINCE :-

Kassala - A new hospital has just been completed here to meet the increased medical demands of the Province.

Gedaref - There is a small hospital at Gedaref, but up till now, very little medical work has taken place in this Merkaz. There is room for great development.

Gallabat - The Leper Hoosh has been removed from Gallabat to Gedaref for convenience of administration.

FUNG PROVINCE :-

Singa - The small civil hospital here carries out very useful work.

The Senior Medical Officer of this Province is endeavouring to raise the standard of sanitation at Singa. It is hoped that considerable improvements will be effected in the course of the next year.

DONGOLA PROVINCE :-

There are two small hospitals in this Province, one at Merowe and the other at Dongola, in charge of Syrian Medical Officers, and three dispensaries at Kareima, Debba and Argo, in charge of Assistant Medical Officers.

The most interesting feature in the work at Dongola is the attempt which is being made to stamp out Bilharziasis. This work has been remarkably successful up to date.

A severe epidemic of Bilharzia had broken out in connection with the pumping stations at Nuri and Gureir, and also at Magall and Tangassi Island. 5,478 injections of Antimonium Tartrate were given and 455 cases were reported as cured. These areas of infection are now clear. Other smaller foci of infection occur in this Province and sporadic cases occur right through the Province. The staff of Assistant Medical Officers in this Province is being increased during the coming year and it is hoped to root out this disease entirely.

A survey of this Province showed 20 % of all school boys infected with Bilharzia, and 18.75 % infected with Trachoma (Egyptian Ophthalmia). As soon as Bilharzia has been stamped out it is proposed to carry out an intensive campaign against Trachoma; at present but little headway is being made against this disease. The boys in the schools and kuttabs are treated, but they are continually re-infected from their homes.

Some very interesting work has been carried out by the Director, Wellcome Tropical Research Laboratories on the molluscs acting as the intermediary hosts of Bilharzia Haemotobia at Nuri and Gureir in Dongola Province. The result of this work is to show that the mollusc Isidora Innesi is the intermediary host for Bilharzia Haemotobium in this region.

UPPER NILE PROVINCE :-

Malakal - A new civil hospital is in course of construction. This is badly needed to accommodate the largely increased number of patients brought to hospital by the work of the "Lady Baker".

Renk - A dispensary has been opened at Renk and is in charge of an Assistant Medical Officer.

Hospital Ship - A hospital ship, the "Lady Baker" has been provided for work on the Upper Nile, working from Malakal as a centre.

The "Lady Baker" was put in commission last spring. She was handed over to Dr. Footner at Malakal on 23.3.1922. She returned to Khartoum on 24.6.1922 [illegible]

that midwives, by this time more enlightened, will be glad to attend there for training.

MEDICAL WORK IN SCHOOLS - A complete medical survey was able to be made last winter, for the first time, of all boys in the Gordon College, and the Omdurman School. This cannot fail to be of the greatest use and guidance to the teaching staff. It is hoped that it will be possible to continue this every year.

The following is a short synopsis of Dr. Humphreys' report on this medical survey;-

854 boys were examined, of these 651 were in the Upper and Primary Schools and 203 in the Workshops :-

	Upper & Primary Schools		Workshops	Grand Total	Infected
(1) Physique					
Good	227	43.2%	-	-	-
Fair	238	44 %	-	-	-
Poor	60	11.4%	-	-	-
(2) Classification in reference to future Government Employment					
Class I	347	62 %	-	-	-
II	46	8.2%	-	-	-
III	119	21.2%	-	-	-
Unfit	47	8.2%	-	-	-
(3) Helminthiasis					
Infected	122	22.4%	42 infected 29%	164	19.2%
(4) Bilharzia					
Infected	44	7.3%	11 infected 7.6%	55	6.4%
Rectal	25		2 Rectal		
Vesical	19		9 Vesical		
(5) Enlarged Spleen					
Infected	45	7. %	4 infected 2.8%	49	5.7%
(6) Trachoma					
Infected	159	24.4%	65 infected 45 %	224	26.2%
(7) Defective Vision					
Errors of Refraction	78	11. %	-	-	-
not less than 6/12 - 6/12 or 6/6 - 6/18					

Hygiene lectures are given to all boys in the 3rd. and 4th. years with special reference to causation and prevention of malaria. Mosquito nets are issued to all teachers in malarial districts. It is especially desired to spread the use of mosquito nets among the general population.

HEADQUARTERS - Boards were held this year, constituted as follows:-

	Fit	Unfit	Total
For permanent service	214	61	275
For temporary service	34	2	36
For pensionable service	133	40	173
For service south	106	23	129
Check Examinations(British)	53	-	53

	Not Recd.	Recom-mended	Total
Invaliding - Natives	46	226	272
Invaliding - British	-	2	2
Sick Leave	6	107	113
Assessment of Age	-	-	19

Grand total - 1072

Most of these Boards were held in Headquarters.

STORES - The work at the Stores is very heavy and better accommodation is very badly needed. Wherever possible consignments of drugs are despatched direct from England to the hospitals for which they are needed, but in spite of this there remains an ever increasing quantity of stores that have to be housed, packed and despatched. A card index system of storekeeping is being introduced instead of the old ledger system.

CENTRAL SANITARY BOARD -

Thirteen meetings of the Central Sanitary Board were held during the year; the following subjects were discussed:-

1. Prophylactic quinine,
2. Leper Colony,
3. Gift of Tryparsamide from the Rockefeller Institute for Sleeping Sickness Work,
4. Licences for "Aides Pharmacien",
5. Mission School at Yubo,
6. Supervision of contacts from Egypt,
7. Sanitation, Malakal,
8. Licence to practise dentistry,
9. Timber from Yei,
10. Leave to Uganda drivers employed on the Rejaf-Aba Road,
11. Immigration of natives from the French Congo,
12. Application to work amongst Sleeping Sickness patients by the Catholic Mission,
13. Anthrax at Shambat and Halfa,
14. Report by Capt. Cantlie on Sleeping Sickness in Opari District,

15. Boys from Yei at Church Missionary Society School at Juba,
16. Prevention of Ankylostomiasis, Bilharziasis, Typhus and Relapsing fever,
17. Amendments to "Quarantine Ordinance, 1908",
18. Site of New Merkaz, Darfur,
19. Redraft of Sleeping Sickness Regulations,
20. Cultivation of Sugar in the Sudan,
21. Amendments to Public Health Ordinance 1912 and draft of Public Health Ordinance 1923
22. Extension of Boundary, Wad Medani Town,
23. Amendments to Khartoum Town Building Regulations,
24. Accommodation of Sudanese lunatics in Egypt Asylums,
25. Recruiting for the Equatorial Battalion from Uganda,
26. Appointment of British Sanitary Inspector for Blue Nile Province,
27. Standard of Vision for Sudan Government Service,
28. Pilgrim Traffic Rules to prevent overcrowding on vessels,
29. Quarantine Island at Port Sudan, application for private lease,
30. Malakal and Medani Town Building Regulations amendments,
31. Licence to practice pharmacy,
32. Licence to practice medicine,
33. Licence to sell drugs wholesale,
34. Abolition of Municipal Farm, Khartoum Province,
35. Egyptian recruits infected with Bilharzaisis and Ankylostomiasis,
36. Increased quarantine dues for ships and passengers at Suakin.

The Sleeping Sickness Regulations have been redrafted and revised. Owing to the delay in the revision of the Public Health Ordinance, the Sleeping Sickness Regulations have been made dependent on the Public Health Ordinance 1912. It is hoped to complete the revision of the Public Health Ordinance very shortly.

PUBLIC HEALTH :-

The general health during the year has on the whole been satisfactory. The incidence of malaria throughout the central Sudan was heavy but showed some improvement on that of the previous two years, although the rainfall was heavier.

An epidemic of small pox and a local outbreak of cerebro-spinal fever are referred to under these headings.

COMMUNICABLE DISEASES :-

Anthrax - Two cases of anthrax occurred. One at Port Sudan in a porter who had been infected while carrying a bundle of skins which were being trans-shipped at Port Sudan. The other near Sungikai in the Nuba Mountains Province. This case was infected from an isolated outbreak of Anthrax that occurred in cattle in this Province.

Cerebro-spinal Fever - A small outbreak of acute epidemic cerebro-spinal fever occurred among the labourers working on the new pumping station at Wad El Nau last December. Some anxiety was felt at first lest the work on the pumping station should be seriously interfered with Vigorous measures were taken and the outbreak was thus strictly limited. 32 cases occurred with 28 deaths.

Chicken Pox - Small epidemics of chicken pox occurred at Gedaref in the Kassala Province, Kawa in the White Nile Province, Malakal in Upper Nile Province and Rumbek in the Bahr-el-Ghazal Province.

Dengue - 43 cases occurred, of which 34 were at Port Sudan and 9 at Suakin.

Diphtheria - Three cases occurred, one each at Halfa, Khartoum and Port Sudan.

Dysentery - 438 cases were admitted to hospital. Of these 300 were amoebic and 48 bacillary. Of these latter 4 occurred at Khartoum, 8 at Omdurman and 18 at Port Sudan. It is probable that in the future a larger proportion of the cases of dysentery occurring at out-stations will be recognised as being bacillary.

Influenza was sporadic throughout the Sudan. 184 cases occurred at Port Sudan, 58 cases at Khartoum and 30 at Omdurman. A small epidemic occurred in the 10th. Sudanese at Malakal, and another at Kurmuk in the Fung Province.

Malta Fever - Seven cases occurred - 1 at Khartoum, 1 at Omdurman, 3 at Port Sudan and 2 at Suakin.

The use of goats' milk for drinking is almost universal throughout the country, but it also an almost universal custom among the settled population to scald the milk to prevent it going sour. It is to this habit that the comperative immunity of the country to this disease is probably attributable. In cases where infection occurs the milk has probably been needed in a hurry and milked straight from a goat kept in the house enclosure.

Malaria - The incidence of malaria has been very severe throughout the Central Sudan owing to the very heavy rains.

A severe epidemic occurred in the autumn at Makwar owing to the relaxation of the hishing and pumping work usually carried out at this season. 1,856 cases were admitted to hospital and 31 deaths occurred. Taking into account the smallness of the number affected, this incidence was extremely severe (For details see under Makwar).

At Khartoum 593 cases were admitted for malaria and at Wad Medani 582. The Health of Khartoum and Omdurman is dealt with under a separate report by the Chief Sanitary Officer.

Measles - Small outbreaks occurred in Dongola Province. The attacks were complicated in many cases by pneumonia.

Mumps - 56 cases of this disease occurred, of which 19 were at Khartoum and 20 at Atbara.

Phlebotomus Fever is sporadic throughout the northern and Central Sudan.

Puerperal Fever - Two cases are reported from Omdurman. In reality the incidence of puerperal fever is very heavy throughout the northern and Central Sudan. This question is dealt with under Midwives' School.

Small Pox - An epidemic of small pox broke out last winter at Khartoum among recent immigrants from Kordofan, it spread up the Blue Nile as far as Roseires and up the White Nile as far as Kosti; later, in the summer it spread north to Atbara, Sinkat and Port Sudan, but the outbreaks in these northern provinces were very limited. Fortunately vaccination had been very thorough in the Provinces north of Khartoum and in the Blue Nile Province where the population is densest.

The total number of cases was approximately 179 of which 13 were fatal.

The number of vaccinations performed in special connection with this epidemic was 191,577.

Typhoid Fever - 32 cases occurred, of these 8 occured at Khartoum, one at Omdurman, 5 at Atbara, 6 at Port Sudan and 4 at Wad Medani. This infection would appear to have been fly-borne

in the majority of cases. In the case of natives living outside the towns and drink from any source of supply, water carriage cannot be excluded.

Tuberculosis - 234 cases were admitted suffering from tuberculosis. This disease is widespread throughout the Central and Northern Sudan. No evidence has been brought forward to show that it is on the increase. It would appear to be, to a large extent, dependent on malaria. After a heavy malarial incidence severe cases of pulmonary tuberculosis appear. Malaria lowers the vitality and gives the latent tuberculosis infection its chance. At the same time, during the Kharif native huts are hermetically sealed during the night to prevent the increase of malaria. I believe that the decrease of pulmonary tuberculosis will march hand in hand with the decrease of malaria as mosquito prevention gradually becomes effective throughout the Sudan.

Whooping Cough - Small outbreaks of this disease constantly occur in the northern and central Sudan particularly in Dongola Province.

QUARANTINE :-

Halfa - Between 1.10.1921 and 23.2.1922 (when the importation of labour ceased) 3982 Egyptian labourers passed through Halfa Quarantine Station. For measures taken see last year's report.

Port Sudan - The shipping entering Port Sudan harbour shows an increase on 1921 figures. The comparison is as follows:-

	1921	1922
Ships	412	452
Sambuks	587	644

17 British men of war are included in the total of ships.

OUTPATIENTS - The percentage of Government employees treated as out-patients has decreased from 50.1% to 46.5%. This is attributable to the fact that the Irrigation works were closed for the summer and the labourers returned to their homes.

The percentage of school children attendances also decreased from 12.4% to 11.6%.

"All others" increased from 30.9% to 35.1%, the actual number treated free increasing by 10,983.

large extent dependent on metals. Vitamin A [illegible]

[illegible] to cause [illegible]

[illegible] and severe [illegible] vitality and [illegible]

[illegible] and growth and [illegible] at the same time [illegible]

[illegible] of the [illegible]

[illegible]

Vitamins essential for [illegible] - [illegible]

[illegible]

Table - I.

	Total		Free		On Payment	
		%		%		%
Government Employees	165341	46.5	154864	49.9	10477	23.1
School Children	41336	11.6	41281	13.4	55	0.1
Prisoners	24261	6.8	24261	7.8	-	-
All others	124789	35.1	89878	28.9	34911	76.8
Grand total	355727	100.	310284	100.	45443	100.

OPERATIONS - 1,755 operations were performed during the year, in comparison with 1,777 last year, i.e. a decrease of 22. Among these were :-

147 Amputations,
82 Eye operations and
72 Operations for hernia.

About 10,000 injections of Novarsenobillon were given.

BIRTH AND DEATH REGISTRATION - The new system of registration initiated on 1st. January, 1922, appears to be working well. The returns appears to be very much more complete since this new system was started than they have been in any previous year. A great deal of patient work on the part of Province officials will be needed before these returns can be considered in any way complete.

The comparison is as follows :-

	1922	1921
Births registered	33,673	23,587
Deaths registered	18,319	18,991
	51,992	42,578

Table II shows that the amount of registration in the Bahr-el-Ghazal, Upper Nile, Nuba Mountains, Red Sea, Mongalla and Darfur Provinces is practically nil.

Table III shows the deaths recorded by ages, with a high child death rate.

Table IV shows the death rate per 1,000 births - children under oneyear of age :-

Table - IV

Province	Births registered	Deaths under one year	Rate per 1000
Khartoum	3,473	239	63.6
Halfa	1,461	182	124.5
Red Sea	213	46	215.9
Berber	3,357	208	61.9
Dongola	4,916	366	74.4
Kassala	984	37	37.6
Blue Nile	8,433	487	57.9
Fung	2,687	111	41.4
White Nile	2,596	110	42.3
Kordofan	5,052	108	21.1
Bahr-el-Ghazal	31	1	32.2
Upper Nile	79	4	50.7
Nuba Mountains	318	6	18.9
Mongalla	9	2	222.2
Darfur	75	4	53.3

Table V shows the admissions and deaths by diseases.

Table- V.

Diseases	Total							
	Europeans				Natives			
	Male		Female		Male		Female	
	A.	D.	A.	D.	A.	D.	A.	D.
Table "A"								
TUBERCULAR								
1. Disease of lung	3	-	-	-	22	13	16	4
2. All other tubercular diseases	1	1	-	-	114	5	32	-
VENEREAL								
3. Syphilis	6	-	-	-	891	-	388	3
4. Gonorrhoea	5	-	-	-	522	2	127	-
5. Soft Sore	3	-	-	-	27	-	11	-
E Y E								
6. Trachoma	-	-	-	-	61	-	11	-
7. All other eye diseases	11	-	-	-	481	-	91	-
8. EAR	1	-	-	-	66	-	4	-
9. SKIN	2	-	-	-	176	-	15	-
10. WOUNDS & OTHER INJURIES	40	3	4	-	3151	32	305	19
TUMOURS								
11. Malignant	1	1	1	-	31	-	15	2
12. Non Malignant	2	-	2	-	43	-	28	2
OF WOMEN								
13. Gynaecological	1	-	5	-	5	-	80	3
14. Confinements	3	-	25	-	3	-	30	-
15. POISONING	2	1	-	-	4	1	-	-
Total Table "A"	81	6	37	-	5648	53	1154	33
Table "B" (Tropical)								
1. Ankylostomiasis	-	-	-	-	110	-	1	-
2. Bilharziais	-	-	-	-	98	-	2	-
3. Blackwater Fever	1	-	-	-	21	4	-	-
4. Dysentery, Amoebic	13	-	3	-	361	19	13	1
5. Dysentery, Bacillary	5	-	2	-	39	2	2	-
6. Filariasis	-	-	-	-	2	-	1	-
7. Madura Disease	-	-	-	-	79	-	19	-
8. Malaria	117	1	6	-	4205	42	72	1
9. Leishmaniasis (Kala-Azar)		-	-	-	29	4	2	-
10. Trypanosomiasis	-	-	-	-	1	-	-	-
11. Yaws	-	-	-	-	1	1	-	-
12. Sunstroke	-	-	-	-	6	3	-	-
13. Heatstroke	1	1	-	-	2	-	-	-
14. Oriental sores	-	-	2	1	20	-	-	-
Total Table "B"	137	2	13	1	4974	75	112	2

Table - V (Continued)

Diseases	Total							
	Europeans				Natives			
	Male		Female		Male		Female	
	A.	D.	A.	D.	A.	D.	A.	D.
Table"C"(Infective)								
1. Anthrax	-	-	-	-	1	-	-	-
2. Cerebrospinal Men.	-	-	-	-	1	1	-	-
3. Chicken Pox	-	-	-	-	124	-	17	-
4. Dengue	-	-	-	-	42	-	1	-
5. Diphtheria	1	1	1	1	-	-	-	-
6. Enteric(Including paratyphoid)	3	-	2	-	26	7	1	-
7. Erysipelas	-	-	1	-	19	1	1	1
8. Gastro-enteritis of children	-	-	-	-	-	-	-	-
9. German Measles	-	-	-	-	41	1	2	-
10.Infective Jaundice	-	-	-	-	11	-	1	1
11.Influenza	26	1	1	-	526	4	20	-
12.Leprosy	-	-	-	-	17	-	-	-
13.Malta Fever	-	-	-	-	6	1	1	-
14.Measles	-	-	-	-	22	-	9	-
15.Mumps	1	-	-	-	55	-	-	-
16.Puerperal Fever	-	-	-	-	-	-	2	-
17.Pneumonia(Epidemic)	-	-	-	-	47	8	10	2
18.Rheumatic Fever	-	-	-	-	35	-	1	-
19.Scarlet Fever	-	-	-	-	1	-	-	-
20.Small Pox	-	-	-	-	116	14	30	5
21.Tetanus	-	-	-	-	1	1	-	-
22.Whooping Cough	-	-	-	-	3	1	1	-
Total Table "C"	31	2	5	1	1094	39	97	9
Table"D"								
1. Circulatory System	8	-	-	-	206	20	31	6
2. Respiratory System	9	1	2	-	860	60	62	8
3. Alimentary System	49	2	9	-	938	33	82	5
4. Genito-Urinary "	17	-	2	-	406	19	19	2
5. Nervous System	2	-	-	-	135	5	38	3
6. Scurvy	2	-	1	-	45	4	2	-
7. Diabetes	-	-	-	-	18	-	3	-
8. Fever of uncertain origin	17	-	1	-	666	4	17	1
9. All other diseases	15	-	1	-	643	9	53	3
Total table"D"	119	3	15	-	3917	154	307	28
" " "A"	81	6	37	-	5648	53	1154	33
" " "B"	137	2	13	1	4974	75	112	2
" " "C"	31	2	5	1	1094	39	97	9
Grand Total	368	13	70	2	15633	321	1670	72

Table VI shows number of in-patients and out-patients and hospital stoppages of civil patients treated in Military Hospitals :-

T a b l e VI

Hospital or Dispensary	Inpatients		Outpatients		Hospital Stoppages	
	1921	1922	1921	1922	1921 £.m/ms.	1922 £.m/ms.
Shendi	70	83	2010	1786	34.127	28.995
Roseires	46	100	1060	1572	16.303	38.560
Bara	72	58	1445	998	11.155	16.154
Talodi	124	108	2491	6045	27.959	49.800
Dilling	66	61	428	913	12.425	11.225
Dongola	584	657	2418	4049	16.320	97.827
Gallabat	102	98	430	1813	-	6.250
Torit	118	180	3668	4160	25.990	45.065
Yei	429	558	15	156	57.920	73.530
Kajo-Kaji	72	491	1959	836	2.610	13.585
Wau	201	271	6105	6797	48.262	49.065
Tembura	90	160	-	-	-	- x
Raga	115	91	3239	2939	6.815	8.440
Rumbek	275	354	5573	18258	10.110	28.450
Akobo	49	80	1541	2043	8.697	5.771
El Fasher	607	545	5949	5861	236.847	244 .340
Nasser	10	3	426	61	4.070	3.112
Zalingei	122	10	557	4	22.975	16.350
Awail	-	52	-	487	-	-
Nimule	-	-	-	1158	-	-
Kurmuk	22	-	-	-	15.460	15.905 +
Nyala	-	-	-	-	35.495	18.130
Kuttum	-	-	-	-	14.710	9.490
Total	3174	3960	39314	59936	608.252	780.034

x No register of Out-patients.
+ No Medical Officer.

Table VII shows Receipts, In-patients, Outpatients and Operations in 1922.

Table VIII shows vaccinations performed during the year 1922.

Table IX shows admissions and deaths in hospitals for the year 1922.

Table X shows average daily constantly sick in hospitals for the year 1922.

CONSERVANCY - Conservancy throughout the Sudan is based on the bucket system. The double bucket system in the larger towns where this can be afforded, the single bucket system in smaller towns and Merakiz where funds are insufficient to allow of the less imperfect system.

The proper carrying out of the bucket system is becoming

increasingly difficult in the Sudan for the following reasons:-

The greater demand for labour makes it increasingly difficult to find men to carry out this unpleasant work at any reasonable wage.

The continually increasing number of buckets - in the case of towns which are not yet prosperous enough to pay for a British Sanitary Inspector places the problem of organisation and supervision almost beyond the power of the existing staff.

The adequate washing and cleaning of buckets becomes increasingly difficult in towns with no proper water supply.

To meet the difficulties thus experienced in growing towns and Merakiz which cannot yet afford British Sanitary Inspectors, a double bucket system or an adequate water supply, the local authorities are being encourage to return to the deep pit latrine both for private and public latrines, care being taken to ensure that the pits are sufficiently deep and that no danger of contamination of well water is increased.

The encouragement of this kind of latrine is especially noted at Wad Medani in the case of private latrines, at Port Sudan in the case of public latrines and at Singa(a smaller town) in the case of both.

Table 11 shows the estimated expenditure during the year 1922 and budgetry estimates for 1923.

GD

Khartoum.
17.3.1923.

Director, Medical Department,
Sudan Government.

Table - II

Province	Births				Still Births				Deaths			
	Europeans		Natives		Europeans		Natives		Europeans		Natives	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Khartoum	16	14	1773	1640	-	-	126	71	12	4	914	1106
Halfa	-	-	750	711	-	-	13	24	-	-	360	332
Red Sea	3	6	97	116	-	-	4	7	3	4	224	159
Berber	3	1	1816	1541	-	-	65	37	-	-	948	910
Dongola	-	-	2512	2404	-	-	112	96	-	-	827	850
Kassala	2	-	514	470	-	-	17	17	-	-	490	355
Blue Nile	1	1	4435	3998	-	-	258	118	1	1	2260	2264
Fung	-	-	1401	1286	-	-	15	10	-	-	938	818
White Nile	1	-	1380	1216	-	-	53	32	-	-	830	665
Kordofan	1	-	2625	2427	-	-	30	26	-	-	1392	1124
Bahr-el-Ghazal	-	-	11	20	-	-	-	-	-	-	20	13
Upper Nile	-	-	39	40	-	-	2	-	-	-	54	44
Nuba Mountains	-	-	185	133	-	-	2	17	-	-	159	91
Mongalla	-	-	6	3	-	-	-	-	-	-	5	3
Darfur	-	-	45	30	-	-	-	1	1	-	64	74
	27	22	17589	16035	-	-	697	456	17	9	9485	8808
	49		33624		-		1153		26		18293	
	33673				1153				18319			

% of Still births to Births - 3.42 approx.

Table - III

Nationality	Births		Deaths by ages							Total Deaths		Total Still Births	
	Male	Female	Under 1	1 - 5	5 - 10	10-20	20-40	40-60	Over 60	Male	Female	Male	Female
British	6	3	1	-	1	-	4	1	1	5	3	-	-
Greek	16	12	3	-	1	-	2	4	2	6	6	-	-
Other Europeans	5	7	-	1	-	-	2	1	2	6	-	-	-
Egyptians & Syrians	434	364	56	26	5	8	36	24	38	111	82	10	3
Natives of Sudan	17144	15650	1844	2369	1207	1447	3516	3733	3931	9333	8714	686	451
All others	11	21	7	3	1	5	20	13	4	41	12	1	2
Total	17616	16057	1911	2399	1215	1460	3580	3776	3978	9502	8817	697	456
Grand Total	33673					18319						1153	
% Deaths by ages			10.4	13.0	6.6	7.9	19.5	20.6	21.7				

T a b l e - VII

Receipts, In-patients, Out-patients Operations for the year 1922

Hospital or ispensary	In-patients		Hospital Stoppages		Out-patients		Sale of Medicines		Total receipts		Operations	
	1921	1922	1921 £.m/ms.	1922 £.m/ms.	1921	1922	1921 £.m/ms.	1922 £.m/ms.	1921 £.m/ms.	1922 £.m/ms.	1921	1922
hartoum	1750	2089	1427.014	1315.573	29254	32692	305.570	432.785	1732.584	1748.358	300	307
mdurman	847	997	480.011	549.581	15491	20411	348.245	399.370	828.256	948.951	86	67
tbara	1730	1941	895.698	924.502	28827	29205	576.841	493.375	1472.539	1417.877	173	202
ort Sudan	1631	1276	1282.952	1028.502	16751	15787	493.391	589.168	1776.343	1617.670	175	185
uakin	187	188	134.261	118.848	10206	8583	259.015	129.785	393.276	248.633	15	21
erowe	495	510	198.437	158.611	9083	10527	236.579	191.919	435.016	350.530	81	47
ongola	242	260	92.395	71.277	14642	13532	88.181	82.447	180.576	153.724	70	38
alfa	378	326	141.748	136.244	12890	9701	95.052	88.868	236.860	225.112	22	37
ueim	402	340	204.951	217.133	9548	8536	286.180	295.130	491.131	512.263	58	44
edani	2153	1951	929.589	917.498	10701	10008	518.455	670.615	1448.044	1588.113	207	210
l-Obeid	1406	1091	668.894	549.146	9343	8880	331.160	312.825	1000.054	861.971	100	107
ahud	301	231	132.697	96.554	5144	5251	195.196	223.610	327.893	320.164	11	13
assala	518	455	220.152	171.554	13705	14147	250.055	283.013	470.207	454.567	106	112
edaref	209	178	52.025	75.686	5698	5534	74.675	95.710	126.700	171.396	21	12
akwar	3419	3432	-	-	54471	46909	-	-	-	-	201	190
inga	475	427	199.387	200.533	8253	6726	178.995	103.770	378.382	304.303	34	41
alakal	470	384	92.303	148.184	8432	11415	327.778	200.542	420.081	348.726	96	117
osti	521	541	94.619	100.111	4844	4225	72.014	54.549	166.633	154.660	1	1
hartoum North	208	480	-	-	16237	12634	142.387	217.088	142.387	217.088	-	-
bu Hamed	147	192	18.088	30.937	2433	3799	27.623	28.008	45.711	58.945	-	-
erber	-	-	-	-	7428	3683	32.745	56.733	32.745	56.733	-	-
l Damer	-	-	-	-	3184	2712	16.823	16.691	16.823	16.691	-	-
okar	-	-	-	-	6402	5085	110.090	75.198	110.090	75.198	-	-
inkat	-	-	-	-	1025	-	15.175	37.260	15.175	37.260	-	-
ongonab	-	-	-	-	4864	5126	4.608	6.940	4.608	6.940	-	-
ort Sudan Prison	126	147	-	-	2614	3004	-	-	-	-	-	-
hartoum North Prison	181	273	-	-	7178	6265	-	-	-	-	10	4
ori	-	-	-	535	4412	2402	19.650	24.285	19.650	24.820	-	-
ebba	-	-	-	-	4298	5286	19.419	36.002	19.419	36.002	-	-
ennar	-	-	-	-	2869	3981	21.640	30.590	21.640	30.590	-	-
eidab	-	-	-	-	1283	1168	19.444	22.757	19.444	22.757	-	-
ebel Aulia	486	33	-	-	20350	3907	-	-	-	-	10	-
ambeila	-	-	-	-	1509	1221	8.920	9.030	8.920	9.030	-	-
ego	7	-	-	-	4477	8845	39.130	51.190	39.130	51.695	-	-
ag Abdalla	375	-	-	-	9169	-	-	-	-	-	-	-
n Ruaba	-	-	-	-	2930	4452	41.750	69.205	41.750	69.205	-	-
areima	-	-	-	-	1321	5511	7.090	20.007	7.090	20.007	-	-
ebeit	-	-	-	-	-	-	2.425	2. -	2.425	2. -	-	-
orti & Nuri	-	-	-	-	4831	13761	35.875	29.660	35.875	29.660	-	-
ady Baker	-	-	-	-	-	-	-	38.475	-	38.475	-	-
ashad	-	-	-	-	-	816	-	12.507	-	12.507	-	-
enk	-	-	-	-	-	-	-	8.966	-	8.966	-	-
odok	-	-	-	-	-	-	-	.800	-	.800	-	-
eadquarters	-	-	-	-	-	-	-	-	2261.393	341. -	-	-
arantine	-	-	-	-	-	-	-	-	581.410	613. -	-	-
amped paper	-	-	-	-	-	-	-	-	137.520	132. -	-	-
nes	-	-	-	-	-	-	-	-	31.335	15. -	-	-
Total	18664	17742	7265.221	6811.009	376097	355727	5202.176	5441.378	15479.055	13353.387	1777	1755

T a b l e - VIII

Vaccinations performed during the year 1922

Province	Primary			Re-vaccination			Total		
	Success	Failed	Unknown	Success	Failed	Unknown	Success	Failed	Unknown
Khartoum	3376	1154	34643	360	1160	3148	3736	2314	37791
Halfa	3619	963	3942	-	-	-	3619	963	3942
Red Sea	476	400	10097	5	178	318	481	578	10415
Berber	10745	2930	3863	102	5	-	10847	2935	3863
Dongola	4698	1999	754	1539	1629	313	6237	3628	1067
Kassala	3748	408	-	1124	233	1363	4872	641	1363
Blue Nile	29008	10251	28885	2500	200	300	31508	10451	29185
Fung	2185	516	24348	15	9	828	2200	525	25176
White Nile	1162	449	6926	-	-	103	1162	449	7029
Kordofan	2380	1120	5932	-	-	-	2380	1120	5932
Bahr-el-Ghazal	250	200	4850	34	110	21	284	310	4871
Upper Nile	57	83	4416	20	4	765	77	87	5181
Nuba Mountains	126	591	37	14	34	-	140	625	37
Mongalla	-	-	5560	-	-	-	-	-	5560
Darfur	124	66	66	-	-	-	124	66	66
Total	61954	21130	134319	5713	3562	7159	67667	24692	141478

Total all vaccinations - 233;837

Table - IX
Admissions and Deaths in Hospitals -

Hospital or Dispensary	Europeans						Natives					
	1921			1922			1921			1922		
	Adm.	Deaths	%	Adm.	Deaths	%	Adm.	Deaths	%	Adm.	Deaths	%
Khartoum	182	10	5.4	144	6	4.1	1568	66	4.2	1945	64	3.2
Omdurman	1	-	-	-	-	-	846	20	2.3	997	32	3.2
Atbara	93	1	1.1	44	-	-	1643	20	1.5	1897	14	.7
Port Sudan	133	2	1.5	71	6	8.4	1498	36	2.4	1205	29	2.4
Suakin	2	-	-	2	1	50.	185	18	9.1	186	12	6.4
Merowe	1	-	-	-	-	-	494	7	1.4	510	7	1.3
Dongola	-	-	-	-	-	-	242	1	.4	260	3	1.1
Halfa	3	1	33.3	1	-	-	375	11	.3	325	4	1.2
Dueim	-	-	-	-	-	-	402	16	3.9	340	9	2.6
Wad Medani	3	-	-	4	-	-	2150	26	1.2	1947	38	1.9
El-Obeid	2	-	-	2	-	-	1404	30	21	1089	37	3.3
Nahud	-	-	-	-	-	-	301	7	2.3	231	2	.8
Kassala	-	-	-	2	-	-	518	21	4.	453	11	2.4
Gedaref	-	-	-	-	-	-	209	6	2.4	178	6	3.3
Makwar	93	1	1.1	167	2	1.1	3326	76	2.3	3265	58	1.7
Singa	1	-	-	-	-	-	474	15	3.1	427	10	2.3
Malakal	-	-	-	1	-	-	470	8	1.5	383	10	2.6
Kosti	1	-	-	1	-	-	520	9	1.7	540	7	1.2
Khartoum North	-	-	-	-	-	-	208	4	1.9	480	7	1.4
Abu Hamed	-	-	-	-	-	-	147	-	-	192	1	.5
Port Sudan Prison	-	-	-	-	-	-	126	9	7.1	147	7	4.7
Khartoum North Prison	1	-	-	-	-	-	181	9	4.9	273	25	9.1
Gebel Aulia	-	-	-	-	-	-	486	17	3.5	32	1	3.1
Total	516	15	2.9	439	15	3.4	17753	431	2.4	17302	394	2.2

Table - X
Average daily constantly Sick 1922

Hospital or Dispensary	No. of beds equipped	1921 Oct.	Nov.	1922 Dec.	Jany.	Feb.	March	April	May	June	July	Aug.	Sept.	Average by month by hospital
Khartoum	64	62.3	53.7	49.7	52.5	60.	63.7	65.5	55.5	49.6	45.4	51.9	79.7	689.5
Omdurman	78	50.3	52.1	47.	43.8	49.	38.7	41.2	47.7	42.7	38.	45.7	42.2	538.4
Atbara	70	85.3	66.8	48.8	59.3	64.2	50.9	58.3	46.4	53.7	51.7	51.5	64.9	701.8
Port Sudan	74	48.	47.9	53.8	52.	46.7	44.7	44.8	37.2	29.4	29.5	24.0	30.6	488.6
Suakin	17	12.7	14.1	11.1	10.3	12.5	10.6	8.3	11.1	8.4	7.1	4.6	6.5	117.3
Merowe	31	15.5	13.	9.4	10.	10.4	20.	18.5	25.3	25.2	16.4	15.8	18.5	198.
Dongola	21	5.3	9.1	17.9	9.4	5.7	7;1	7.5	6.6	5.3	9.7	10.9	14.8	109.3
Halfa	28	5.3	4.3	7.3	7.	12.2	12.3	15.8	6.9	9.2	12.5	7.5	9.8	110.1
Dueim	32	10.1	9.3	10.6	10.1	8.9	12.2	10.2	6.	12.1	10.	17.	15.5	132.
Wad Medani	93	80.2	82.6	80.3	67.	65.5	57.5	64.2	34.9	55.1	59.6	68.	91.2	806.1
El-Obeid	46	56.8	42.8	40.7	37.7	55.	47.	40.3	37.3	37.8	30.9	34.9	46.4	507.6
Nahud	33	9.6	10.8	7.6	13.2	11.3	7.	12.6	9.1	12.1	14.0	7.4	10.2	124.9
Kassala	26	17.2	19.	17.	15.5	18.3	17.3	22.4	15.9	17.5	13.8	14.3	15.7	203.9
Gedaref	15	11.9	12.7	10.9	8.4	8.7	5.	6.4	3.7	6.9	8.3	9.	6.2	98.1.
Makwar	39	116.5	149.7	132.9	101.	99.2	56.2	36.4	18.8	17.9	19.	23.	53.3	823.9
Singa	32	13.6	13.3	16.4	12.	14.3	16.7	18.2	17.3	13.1	13.7	19.	23.9	191.5
Malakal	16	5.2	6.8	9.1	12.	8.8	13.7	14.3	14.	16.9	21.	16.9	21.6	160.3
Kosti	12	17.1	13.5	9.3	9.	11.9	13.	11.4	8.8	11.3	10.	11.1	14.5	140.9
Port Sudan Prison	12	12.3	15.9	11.	6.3	4.	3.6	.8	5.7	3.6	1.9	3.2	1.4	69.7
Khtm.North Prison	12	12.7	7.1	11.5	8.7	10.1	8.7	9.2	8.3	4.9	4.7	5.6	10.8	102.3
Khtm.North Dispensary	12	7.3	6.9	17.6	23.3	4.8	5.1	9.4	8.3	9.2	8.2	7.7	13.8	121.6
Abu Hamed	6	2.6	2.3	1.1	4.8	3.	9.6	7.1	6.3	8.4	8.5	4.8	3.3	61.6
Gebel Aulia	6	.8	.6	1.	.9			Closed						3.3
Total No.of Beds	775													
Average monthly sick all hospitals		658.6	654.3	622.	574.2	584.5	520.6	522.8	431.1	450.3	433.7	453.8	594.8	6500.7

Average monthly contantly sick - 541.47

Table 11.

Statement of estimated expenditure during the year 1922 and budgetry estimates for 1 9 2 3

Item	1922 Actual Expenses £.	1923 Budget Proposals £.
Personnel:-		
1. Headquarters:-		
a. Classified	9592	13890
b. Unclassified	387	420
2. Hospitals:-		
a. Classified	28781	29328
b. Unclassified	6496	6771
3. Quarantine:-		
a. Classified	2141	2220
b. Unclassified	562	565
4. Sleeping Sickness:-		
a. Classified	5716	6888
b. Unclassified	833	1091
Allowances & Services:-		
Headquarters	22202	26849
Hospitals	13752	14084
Quarantine	1033	1287
Sleeping Sickness	6385	5117
	97880	108510
To be recovered from other sources	7015	9566
	£.90865	£.98944

MEDICAL DEPARTMENT.

SUDAN GOVERNMENT.

Director's Office.

Any further communication on this subject should be addressed :—
The Director
Medical Department,
Sudan Government,
Khartoum.
Telegrams :— "DAWA".

Khartoum, 10th, July *1924*

No. M.D., S.G. 1.1.1. Subject Annual Report 1923.

Duplicate

Dr. Balfour,
LONDON.

Dear Sir,

I forward herewith a copy of the Annual Report for 1923 of this Department.

Please acknowledge receipt.

Your Faithfully.

For/Director, Medical Dept.
Sudan Government.

A.K.